

ABSTRACT OF DISCLOSURE

A paper edge sensing apparatus for borderless printing comprises a first paper sensor mounted in connection with the carrier and the frame in the upstream of a paper convey direction of an ink jet position of the ink jet nozzles to detect sheet edges, and a controller controlling operations of the ink jet nozzles of the printer head according to a signal from the first paper sensor to control paper print margins. A paper edge sensing method comprises detecting a top edge of the sheet conveyed by the convey unit through the first paper sensor mounted to the carrier at an initial position, generating a top margin print command to jet ink with a predetermined top print margin through the ink jet nozzles of the printer head according to a top edge detection signal from the first paper sensor, detecting the bottom edge of the sheet through the first paper sensor as the carrier passes through the initial position, and generating a bottom margin print command to jet ink with a predetermined bottom print margin through the ink jet nozzles of the printer head according to a bottom edge detection signal of the first paper sensor. The paper edge sensing apparatus and method of borderless printing can improve a degree of precision in sensing paper edges such as top edge, bottom edge, left edge, right edge, and so on, in a borderless printing mode to reduce printing margins for the printer head to jet ink, to thereby reduce ink pollution and consumption due to unnecessary ink jetting.